

**Effect of Calcium, Magnesium and Boron on Yield and Quality of Cauliflower  
(*Brassica oleracea* L.)**

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A field experiment was conducted at the University Experimental Station, Dodangolla (AER - IM3a) during the *Maha* season of 2008/2009 to study the effect of Calcium (Ca), Magnesium (Mg) and Boron (B) on yield and quality of cauliflower. At present, local and overseas demand for cauliflower has been increasing. In Sri Lanka, poor yield and quality of the produce are the major constraints in obtaining a profitable income from agriculture. The Department of Agriculture (DOA) recommends a blanket fertiliser for all types of cabbage. In literature it was found that inadequate supply of micro nutrients may be a reason for lower yield and poor quality of cauliflower in Sri Lanka.

Soil samples were analysed for available nutrients and the most deficit micro nutrients were identified as Ca, Mg and B. The field experimental design was a randomized complete block design with four replicates. Six fertiliser treatments were imposed as recommended by DOA: NPK only, NPK with Ca, Mg and B. NPK with only Ca, NPK with only Mg, and NPK with only B. Plant culture and management were practiced according to DOA recommendations.

Plant height and leaf area were measured up to 50% flowering stage. Time taken to 50% flowering and final yield were measured. Post harvest keeping quality was measured under open air conditions and packed in 150 gauge low density polythene bags at room temperature (28°C) by counting the number of days to show initial signs of rotting, decaying or change in colour.

Plants grown with N, P, K, Ca, Mg and B showed a significant positive effect on yield, leaf area, time taken to 50% flowering and final yield. The highest yield of 7.8 t/ha was recorded with NPK with Ca, Mg and B treatment at Dodangolla soils with a yield gain of 8.3% compared to the DOA recommendation. The results revealed that cow dung increased the yield by 28.6% and the fertiliser mixture with nutrients corrected for deficiencies in soil increased the yield by 39.3%. Significant differences were observed between treatments at both storage conditions. The shelf life was longer in the curds obtained from NPK with Ca, Mg and B treatment irrespective of the storage conditions.

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